



Chemical Industry Council of California

May 31, 2007

Secretary Linda Adams
California Environmental Protection Agency
1001 I Street
Sacramento, CA 95814

RE: CalEPA Green Chemistry Initiative

Dear Secretary Adams:

On behalf of the Chemical Industry Council of California* (CICC) I am pleased to offer these initial comments. Before doing so, however, let me take this opportunity to complement you, Director Gorsen and the DTSC staff on your initial efforts to broadly communicate the goals and plans for the *Green Chemistry Initiative*, and to identify a transparent and inclusive stakeholder process. CICC believes these up-front efforts will serve the process well as it moves forward.

The Chemical Industry Council of California is among a larger group of business organizations to have co-signed a letter identifying a number of initial comments which we share regarding the *Green Chemistry Initiative*. We wish to reiterate our support for the key points. First and foremost, we believe the *Initiative* must be rooted in sound science and employ a risk based approach. To avoid unnecessary duplications of effort, it should appropriately take into consideration existing chemical management programs, not only within California, but also at the federal and international levels. Green chemistry policies should be based upon scientific methodologies that are both objective and reproducible. Alternative technologies and seemingly less hazardous materials do not always prove to be a panacea in the final analysis. A science-based assessment that evaluates human health and environmental considerations, performance, cost and feasibility must include an examination of traditional and alternative technologies, materials and processes. Finally, positive incentives must be a part of the *Green Chemistry Initiative* if it is to ultimately accomplish its goals.

CICC also offers these additional observations and thoughts. The concepts of "green chemistry" are not at odds with the direction of today's modern chemical industry. In fact, the development and implementation of "green" molecules and processes is a next step in the evolution of the industry. Many high profile companies are boldly, and appropriately, embarking on this path in their individual self-interest. In remarks attributable to Paul Anastas, Ph.D., Director of the Green Chemistry Institute at the American Chemical Society, the key to green chemistry is that companies do it not because the government forces them to but rather . . ."because it's more profitable, cheaper and customers like it."

CICC believes CalEPA's *Green Chemistry Initiative* should follow a path pioneered by Drs. Paul Anastas and John Warner who define "green chemistry" and "green engineering" via performance factors, or principles, rather than through narrow and prescriptive regulatory language. CICC believes the Anastas/Warner approach will provide a powerful incentive while the latter approach, *i.e.*, prescriptive regulatory language, will most likely have a deleterious and stifling effect.

We believe it is also important for CalEPA to acknowledge and clearly announce that the process of discovery, testing, commercialization, and market acceptance for new chemicals and chemical processes is lengthy and fraught with uncertainties. The scientific discovery process is a never ending cycle of experimentation, observation, learning and renewed experimentation. There are always trade-offs! There are no absolutes! The pursuit of "Green Chemistry" solutions is more akin to a "journey" than a "destination." Oddly enough, a broad scale application of the "precautionary principle" could have a most chilling effect on commercializing many, yet to be discovered, green molecules and technologies. Most alternatives or substitutes are likely to have less toxicological and environmental testing data than the compounds they might replace. Mechanisms must in place within state government for screening and evaluating claims and counter claims regarding toxicity, lifecycle analysis, and technology development. Within a regulated industry, the private sector can proceed only as fast as regulators can perform their responsibilities. Multimedia and cross functional review and permit teams (including CEQA permit lead agency) would hasten the process and provide enhanced regulatory certainty.

While accolades, and rightly so, are as steeped upon the breakthrough discoveries made within California's prestigious universities and research laboratories, insufficient attention is often given to the drudgery process of transferring that technology from the laboratory to a pilot facility, then to a commercial scale unit, and finally on through market acceptance. "Green" venture capital funds are more than eager to invest in new products and technologies, but only after commercial viability and significant earnings potential are demonstrated. Regulatory uncertainties, layer upon layer of testing, delays in permitting, and insufficient commitment of early stage investment are often the death of many promising discoveries by small entrepreneurs and large multi-national companies alike. If the development of green chemical solutions is to become a new economic engine within California, then considerably more attention needs to be given to understanding the process of technology transfer and what can be done to assist the early stage process.

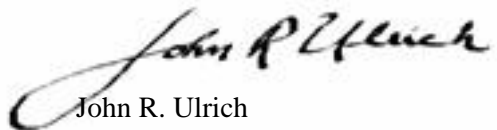
The chemical industry in California has a proud heritage, and while CICC has witnessed significant realignment within the industry over the past 30 years, the men and women of the companies we represent are as motivated and industrious as any to be found. DTSC and CICC have for more and a year been actively engaged in the *Chemical Industry Challenge Program*; a voluntary pollution prevention program designed to prevent pollution, increase worker and community well being, and simultaneously increase

profitability and competitiveness. CICC refers to it as achieving the “triple bottom-line.” The program is a sustainability project for our industry through which all stakeholders are beneficiaries. In the past two weeks DTSC and CICC jointly recognized three outstanding projects, which will have lasting and favorable impacts on the environment. Additional projects will be presented in the months ahead as other companies join the effort. CICC is committed to the success of the *Chemical Industry Challenge Program*.

Even as the next green chemical discovery makes its way through the technology transfer “pipeline,” CICC members are actively applying the principles of green chemistry and green engineering to their daily operations. While the chemicals they produce may be “traditional” rather than “green,” it is imperative that their efforts be recognized and credited as a vital component in CalEPA’s *Green Chemistry Initiative*. Not all traditional chemicals can or every will be replaced with “green” alternatives, but all chemicals can, through a process of continuous improvement and pollution prevention be, manufactured, distributed, and used in a more sustainable manner. We believe the *Chemical Industry Challenge Program*, and other projects like it, will further this objective.

CICC appreciates the opportunity to provide these initial comments and looks forward to interacting with CalEPA, and specifically DTSC, as the *Green Chemistry Initiative* moves forward.

Sincerely,



John R. Ulrich
Executive Director
(916) 989-9692

Cc: Maureen Gorsen, Director DTSC

* The Chemical Industry Council of California (CICC) is a voluntary trade association comprised of large and small chemical manufacturers and distributors throughout California. CICC represents multiple facilities throughout California, including: forty-three (43) manufacturing plants; five (5) research laboratories; and sixty-seven (67) sales, service, and distribution centers. California members account for annual sales in excess of \$3,000,000,000 and directly employ more than 5700 workers, with combined annual payroll in excess of \$283,000,000. An additional 11,000 indirect jobs are created by CICC member companies with an additional combined annual payroll of some \$360,000,000. CICC’s mission is to provide a means for individual companies to combine their talents and resources to deal effectively with public policy issues affecting the chemical industry in California.